

REMARKS

The Office Action dated November 28, 2000 and the references cited therein have been carefully considered. In response to the Office Action, Applicant has amended independent Claim 1 in a sincere effort to overcome the Examiners rejections. Applicant has also added new Claims 11-16 which define a method for forming a housing for a thermometer in accordance with the present invention.

In the Office Action, the Examiner has rejected Claims 1-6 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The Examiner has helpfully pointed out the basis for this rejection. In response, Applicant has amended Claim 1 to overcome the §112 rejection.

Claims 1-10 have also been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,729,672 to Takagi and further in view of U.S. Patent No. 4,738,549 to Plimpton and U.S. Patent No. 6,068,399 to Tseng. Specifically, the Examiner contends that the Takagi patent discloses a device that includes a housing having an inner casing 2 made of a transparent resin and an outer casing 3 made of an opaque resin. Both the inner and outer casings are molded together to form an integral unit having an outer opaque surface and an inner transparent surface. Thus, the Examiner contends that the inner surface is integrated with the outer surface and forms a distinct one-piece casing. The Examiner further states that the outer opaque surface acts as a coating on the transparent inner surface except over the window, which is not covered by the opaque casing. Although the Examiner concedes that the Takagi patent does not explicitly disclose a liquid crystal display, the Examiner contends that the Plimpton patent discloses a device that includes a casing having a transparent window covering a liquid crystal display and an opaque part forming an integral structure by injection molding, wherein the casing material is rugged.

In response to the prior art rejections cited by the Examiner, Applicant has amended Claim 1 to further define the claimed features of the invention. Claim 1, as amended, defines a thermometer housing having a at least one of an outer surface treated such that it is non-transparent and an inner surface at least partially treated such that it is non-transparent, wherein the housing is capable of being formed as a single monolithic unit. It is respectfully submitted that none of the prior art references cited by the Examiner, taken alone or combined, teach or suggest this aspect of the invention.

The Takagi patent is directed to an electronic thermometer, which includes a two-piece casing 4. The casing 4 includes a transparent inner case body 2, which is formed from a transparent resin. The inner case body is surrounded by an opaque outer case body 3, which is formed from an opaque resin. The two-piece casing 4 is manufactured by a two-color injection molding process. The molding process includes molding the cylindrical inner case body 2, and then molding the outer case body 3 to cover the outer surface of the inner case body 2. The case bodies 2, 3 are joined to each other to prevent the intrusion of liquids, as described in column 4, line 63 through column 5, line 2. Details concerning the molding process, which includes a primary injection molding device and a secondary injection molding device, are further described in column 5, lines 8-33.

Although the Takagi patent describes the resulting case 4 as a "one-piece casing", the case is not actually one piece. The disclosure explains the apparent misnomer by stating: "That is, the inner case body 2 is integrated with the outer case body 3 into a unit, but the distinctive characteristics of each of the plastics are unaffected. The thus integrally molded casing 4 is removed from the cavity together with the core and the core is then removed, obtaining the casing 4 which consists of the inner case body 2 and outer case 3 body mutually integrated". (Col. 5, lines 26-33.) Therefore, the Takagi patent does not disclose an electronic fever thermometer that includes a housing capable of being formed as a single monolithic unit, as now defined by amended Claim 1.

The present invention is a water-tight thermometer that can be cleaned and disinfected easily and which can be manufactured economically. In contrast, the thermometer disclosed by Takagi has joints between the main casing and the tip which are more likely to leak and further present a higher risk of bacteria collecting in the area of the joint. Additionally, the two-color injection molding process as suggested by Takagi is a more complicated, and therefore more expensive, manufacturing process.

The Plimpton patent is directed to a water thermometer for pools, hot tubs and spas that includes a casing having a transparent bottom casing portion and a non-transparent casing layer portion, which acts as a colored backing, as described in column 4, lines 49-54 and 60-66. Thus, the casing is manufactured by at least a two-step molding process, which adds significant cost and time to the manufacturing process. Further, the molding process results in additional seams that are subject to leakage. Therefore, the Plimpton patent does not teach or suggest an electronic fever thermometer, which includes a housing capable of being formed as a single monolithic unit, as now defined by amended Claim 1.

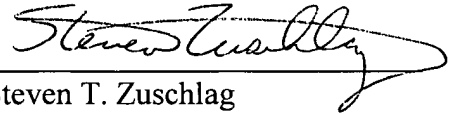
The Tseng patent is directed to an electronic thermometer, which includes a rigid two-piece case 16, 17 attached to a monolithic flexible probe stem 12. The key feature of the invention is that the probe stem is one piece (i.e., monolithic). However, the casing, which is constructed from two separately molded units 16, 17, is clearly not monolithic. The monolithic probe stem advantageously provides an electronic thermometer that is easier and less expensive to assemble. While the advantages of the monolithic probe stem may be analogous to the advantages of the monolithic housing in the subject invention, the Tseng patent does not disclose a housing capable of being formed as a single monolithic unit, as now defined by amended Claim 1. Thus, there is simply no teaching or suggestion in any of the cited references taken alone or combined of this feature of the present invention. Accordingly, Applicant respectfully submits that Claim 1, as amended, and the Claims that depend therefrom patentably distinguish over the prior art.

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In view of the foregoing amendments and remarks, entry and favorable consideration of the amendments and allowance of the application with Claims 1-16 are respectfully solicited.

If the Examiner believes that a telephone interview would assist in moving the application toward allowance, he is respectfully invited to contact the Applicant's attorney at the telephone number listed below.

Respectfully submitted,



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VERSION OF AMENDMENT WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Please amend Claim 1 as follows:

1. (Amended) An electronic fever thermometer including a housing made from a transparent material, the electronic fever thermometer comprising:

a temperature sensor; and

a display element to display the temperature measured by the temperature sensor, the housing having [at least one of] an outer surface and an inner surface, at least one of the outer and inner surfaces being partially treated such that [it] at least a portion of the surface is [coated] non-transparent, the housing [being substantially nontransparent and] having at least one [untreated and] substantially transparent viewing area [in which], the housing being capable of being formed as a single monolithic unit, the display element [is] being arranged adjacent to the viewing area.